

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)

2. (Currently Amended) An apparatus for controlling a relative movement of a cutting blade and a workpiece ~~that~~which are moved relative to each other by a movement device in an operation with a machine tool, said apparatus controlling said relative movement ~~based on the basis of~~ a relative position of said cutting blade and an object ~~that~~which is detected by said movement device when said cutting blade and said object are brought into contact with each other as a result of a relative movement of said cutting blade and said object ~~that~~which is made by said movement device, said apparatus comprising:

a checking device ~~that~~which checks if a contact detecting device for detecting contact of said cutting blade and said object is in a normal condition in which said contact detecting device detects said contact when said cutting blade and said object are brought into contact with each other; and

a contact determining device ~~that~~which determines that said cutting blade and said object have been brought into contact with each other, in accordance with an output provided by said contact detecting ~~device~~device.

3. (Currently Amended) A method of detecting contact and separation of a cutting blade held by a blade holding member, with and from an object, ~~based on the basis of~~ a change of a state of an electric circuit ~~that~~which is changed depending upon whether said cutting blade is in contact with said object or is separated from said object, said method comprising:

a step of preparing an on-off circuit as said electric circuit, said on-off circuit including at least said cutting blade, said object and a power source, and said cutting blade, said object and said power source being arranged in series to each other;

a step of bringing said cutting blade and said object into contact with each other, while a conductive layer having an electrical conductivity is provided in at least one of a space between said cutting blade and said blade holding member, and a space between said cutting blade and said object; and

a step of detecting contact and separation of said cutting blade with and from said object, based on a change of a state of said on-off circuit, wherein:

the state of said on-off circuit depends upon whether said cutting blade is in contact with said object or is separated from said object,

the blade holding member is included in said on-off circuit, and

said blade holding member, said cutting blade, said object and said power source are arranged in series to each other.

4. (Currently Amended) A method according to claim 3,

wherein said contact and said separation are detected on the basis of transition from an open state in which ~~an~~ said on-off circuit as said electric circuit is open, to a closed state in which said on-off circuit is closed,

and wherein ~~said on-off circuit includes at least said cutting blade, said object and a power source which are arranged in series to each other, said on-off circuit being is~~ open when said cutting blade is separated from said object ~~while being~~, and is closed when said cutting blade is in contact with said object.

5. (Currently Amended) A method according to claim 3,

wherein said contact and said separation are detected ~~on the basis~~based on a
~~of transition~~ from an open state in which an on-off circuit is open, to a closed state in which
~~an said~~ on-off circuit is closed,

and wherein ~~said on-off circuit includes at least said blade holding member,~~
~~said cutting blade, said object and a power source which are arranged in series to each other,~~
said on-off circuit ~~is being~~ open when said cutting blade is separated from said object ~~while,~~
and is being closed when said cutting blade is in contact with said object.

6. (Original) A method according to claim 3, wherein said conductive layer
consists of a conductive coating which covers a surface of said cutting blade.

7. (Withdrawn) A method according to claim 4, wherein said conductive layer
consists of a conductive coating which covers a contact surface of said object which surface is
in contact with said cutting blade.

8. (Withdrawn) A method according to claim 7, wherein said object comprises a
master workpiece which has a known dimension and which is held by a workpiece holding
device that is provided for holding a workpiece to be cut by said cutting blade.

9. (Withdrawn) A method according to claim 4, wherein said conductive layer
consists of a conductive sheet which is positioned to be interposed between said cutting blade
and said object when said cutting blade and said object are in contact with each other.

10. (Withdrawn) A method according to claim 3, wherein said cutting blade is
provided by at least a cutting edge of a rotary cutting tool which is to be rotated about an axis
thereof for cutting a workpiece, and an adjacent portion of said rotary cutting tool which
portion is adjacent to said cutting edge,

wherein said cutting edge and said adjacent portion is covered with a
conductive coating as said conductive layer, and said rotary cutting tool is brought into
contact with said object while said rotary cutting tool is being rotated.

11. (Withdrawn) A method according to claim 10, wherein said rotary cutting tool is brought into contact with said object while said rotary cutting tool is being rotated at a velocity substantially equal to that at which said rotary cutting tool is rotated in a cutting operation for cutting said workpiece.

12.-20. (Canceled)

21. (New) A method according to claim 3, further comprising:
a memorizing step of memorizing, as a contact position, a relative position of said cutting blade and said object upon contact of said cutting edge with said object; and
a movement-controlling step of controlling a relative movement of said cutting blade and a workpiece that is to be cut by said cutting blade, on the basis of said contact position memorized in said memorizing step.